

SPLIT TYPE ROOM AIR CONDITIONER WALL MOUNTED type

SERVICE MANUAL

Models

Indoor unit

Outdoor unit

MW24C3F

MR24C3F

MW24Y3F

MR24Y3F

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SPECIFICATIONS

INDOOR UNIT	MW24C3F	MW24Y3F
OUTDOOR UNIT	MR24C3F	MR24Y3F
COOLING CAPACITY	24,200 BTU/hr	24,200 BTU/hr
HEATING CAPACITY	-	27,600 BTU/hr

ELECTRICAL DATA

POWER SOURCE		208 V / 230 V	208 V / 230 V	
FREQUENCY		60Hz	60Hz	
RUNNING CURRENT	COOLING	10.1 A	10.1 A	
RUNNING CURRENT	HEATING	1	10.8 A	
INPUT WATTS	COOLING	2,310 W	2,310 W	
INPUT WATTS	HEATING	-	2,470 W	
SEER		18.0	18.0	
MOISTURE REMOVAL		6.3 Pts/hr (3.0 L/hr)	6.3 Pts/hr (3.0 L/hr)	
AIR CIRCULATION -High		647 cfm (1,100 m³/hr)	647 cfm (1,100 m³/hr)	

COMPRESSOR

TYPE		Hermetic motor compressor, 4 poles, Involute scroll type
DISCRIMINATION		5CS160 XAA23
POWER SOURCE		208 V / 230 V 60Hz
REFRIGERANT	R410A	3 lb. 8 oz (1,600 g)

FAN MOTOR

POWER SOURCE		208 V /	230 V
	HIGH	1,310 r.p.m.	
INDOOR UNIT	MED	1,120 r.p.m.	
	LOW	940 r.p.m.	
	QUIET	830 r.p.m.	
OUTDOOD LINIT	COOL	1,000 r.p.m.	1,000 r.p.m.
OUTDOOR UNIT	HEAT	-	1,050 r.p.m.

DIMENSIONS

INDOOD LINIT	HwWwD	12-5/8 x 39-1/4 x 9 inch	
INDOOR UNIT H x W x D		320 x 998 x 228 mm	
OUTDOOR UNIT	HxWxD	22-3/4 x 31-1/8 x 12-3/8 inch	
	пхихр	578 x 790 x 315 mm	

WEIGHT

INDOOR UNIT	Gross / Net	40 / 31 lbs. (18 / 14 kg)
OUTDOOR UNIT	Gross / Net	106 / 97 lbs. (48 / 44 kg)

NOISE LEVEL

INDOOR UNIT	HIGH	47 dB	C 47 dB / H 45 dB
	MED	41 dB	C 41 dB / H 41 dB
	LOW	36 dB	C 36 dB / H 36 dB
	QUIET	32 dB	C 32 dB / H 32 dB
OUTDOOR UNIT		52 dB	C 52 dB / H 53 dB

REFRIGERANT CHARGE (R410A)

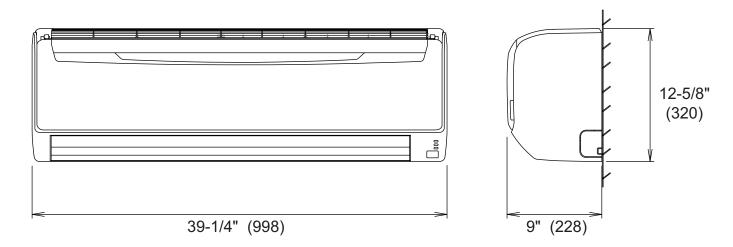
3 lb. 8 oz. (1,600 g)
3 lb. 12 oz. (1,700 g)
3 lb. 15 oz. (1,800 g)
4 lb. 3 oz. (1,900 g)
0.2 oz./ft. (20 g / m)

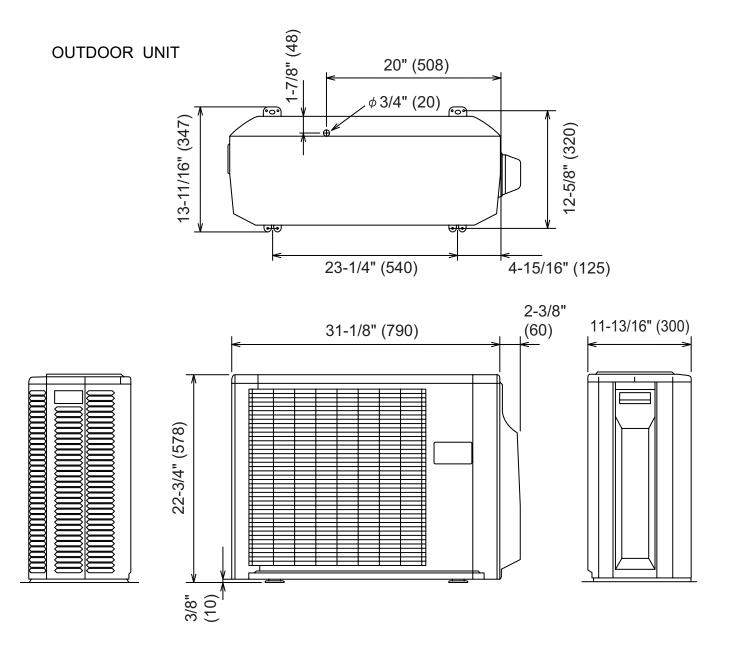
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OUTLINE AND DIMENSIONS

Unit: inch (mm)

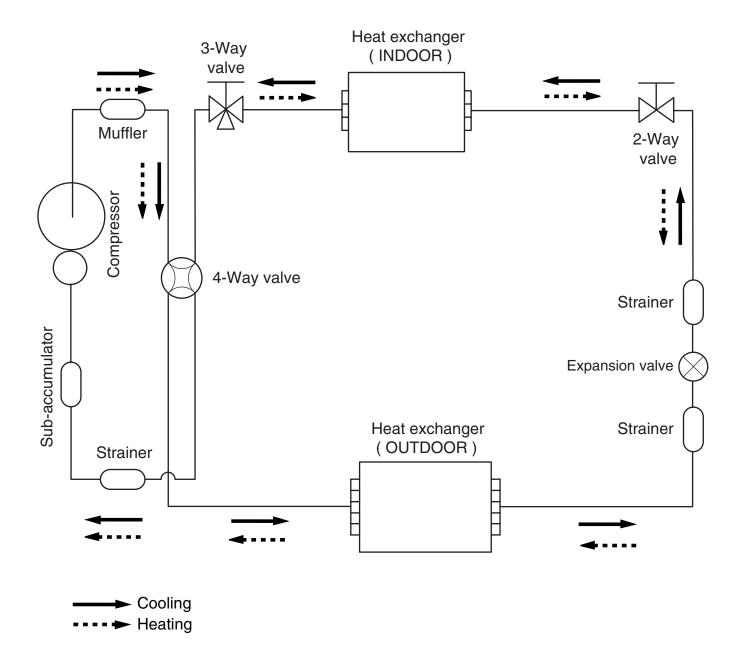
INDOOR UNIT





REFRIGERANT SYSTEM DIAGRAM

Models: MW24C3F/MR24C3F MW24Y3F / MR24Y3F

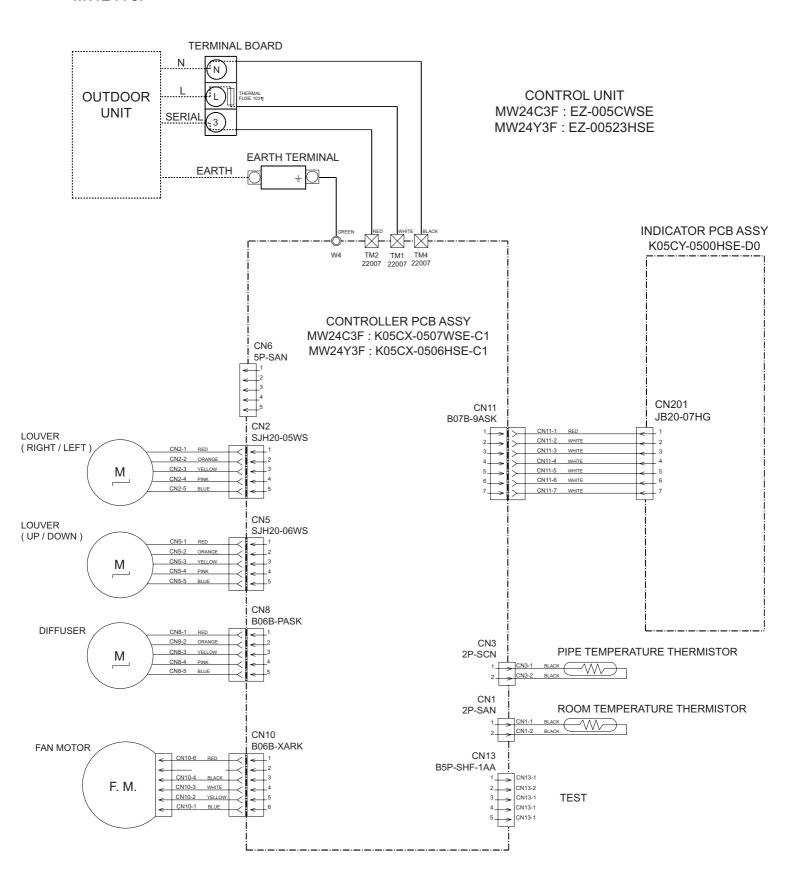


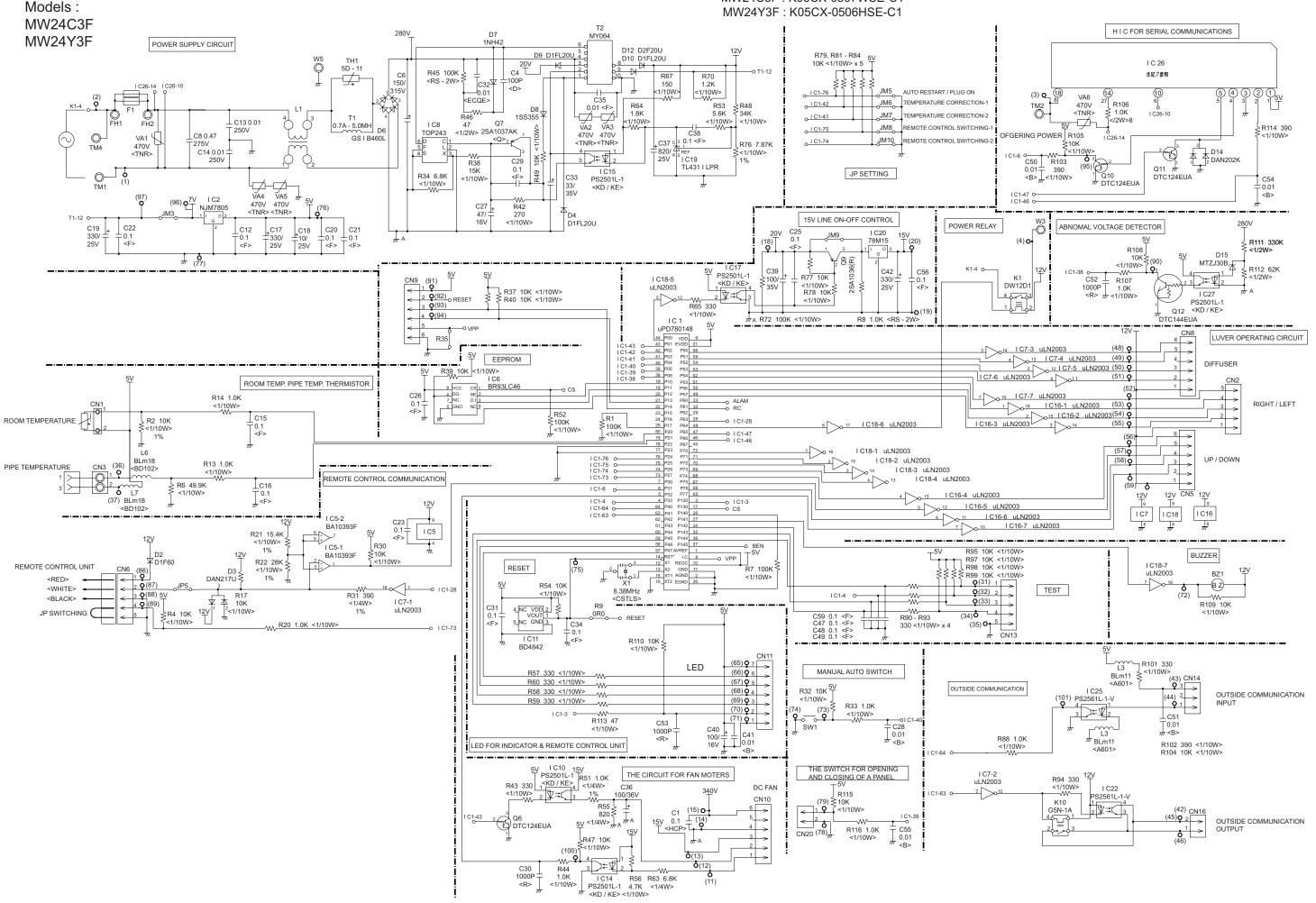
Refrigerant pipe diameter Liquid: 1/4" (6.35 mm) Gas: 5/8" (15.88 mm)

545 1000 4 WV 4+WY CN60 (2 2 BROWN - CAND) THEMISTOR(OUTDOOR TEMP.) CN62 (2 2 2 BLUE CONDO) EXPANSION VALYE FAN MOTOR TO POMER SUPPLY CN61 (2 2 BLACK - (WA) 7 CN500 2 2 BLACK— 1 1 BLACK— BLACK BLACK FUSE 250/25A TERMINAL RED 0 CN700 CN801 M2 M2 61M CN110 123 123 **DUTDOOR UNIT** BLACK PRINTED CIRCUIT BOARD (MAIN PNB) MSO 311H₩ PRINTED CIRCUIT BOARD (FILTER PMB) 109MT BLACK 121 009MT THW YARD CN100 ,∃ТІН∦∑ 123456 123456 **VELLOW** | PRINTED CIRCUIT BOARD | LO CN11 (CAPACITOR PMB) | PN2 **N**29 **N**28 ACT IVE FILTER MODULE CHOKE COIL OKANCE BEOMN BROMN ™o W13¢PURPLE¢N1 W12 + WHITE ORANGE BROWN BLACK-BLUE W8 [YELLOW] RED-BLACK CN200 COMPRESSOR MHILE -BLACK -CREEV -PURPLE -YELLOW YELLOW RED -BROWN -W307 W17 CN301 W306 W302 **W**301 TM102 TM101 123456789 PRINTED CIRCUIT BOARD (IPM PMB) - WHITE-· BLACK · Æ CN40 405MT V 305MT EOEMT W CN303 BED -BBOMM 1 2 2 STEPPING MOTOR (DIFFUSER) STEPPING MOTOR (RIGHT/LEFT) FAN MOTOR STEPPING MOTOR (UP/DOMN) ۱ı INDOOR UNIT GREEN PINK ORANG RD CN2 1234451 1234455 1223455 0M10 65432-CONTROL BOARD 1EST 3 4 55 -12 3 4 455 -12 5 4 13 12 11N) 102030 ₩04 9₩0 CN3 CN1 -12 BLACK TIM4 3 3 MITE BLACK BLACK BLACK (VVV) THERMAL FUSE 1 ()9A08 YAJ9210 ()00041001 THERMISTOR (ROOM TEMP.) THERMISTOR (PIPE TEMP.) **TERMINAL**

INDOOR PCB CIRCUIT DIAGRAM

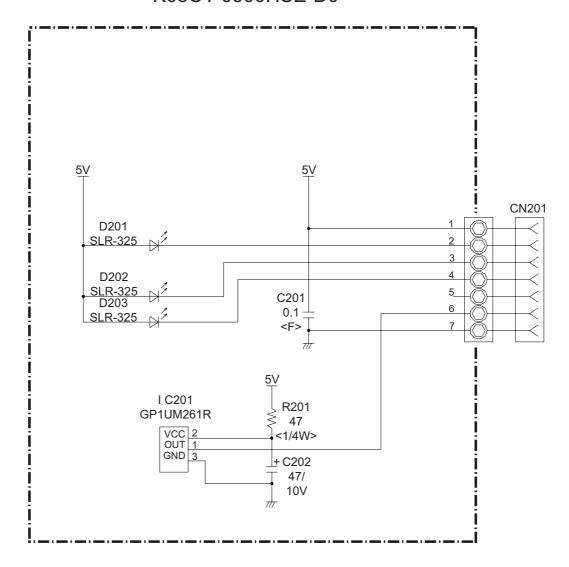
Models: MW24C3F MW24Y3F





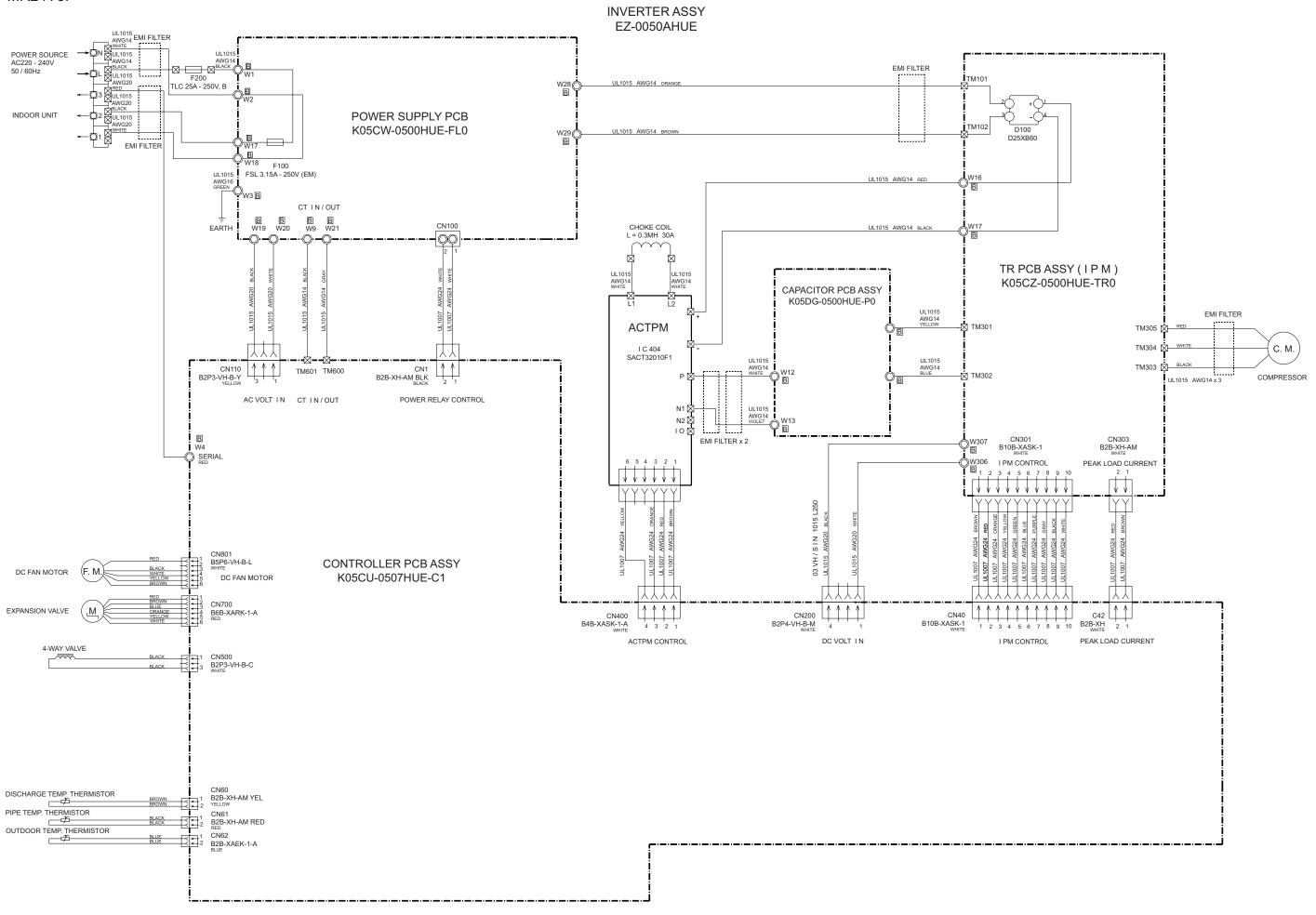
Models: MW24C3F MW24Y3F

INDICATOR PCB ASSY K05CY-0500HSE-D0



OUTDOOR PCB CIRCUIT DIAGRAM

Models: MR24C3F MR24Y3F



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Models: **CONTROLLER PCB ASSY** MR24C3F K05CU-0507HUE-C1 MR24Y3F DC HIGH VOLTAGE CN200 (68) (69)
B2P4-VH-B
WHITE
DC VOLT IN
(70)(71) CN200 **+0**(64) D12 1SS355 72 - - N 2 F201 3A<TSCR> 0R T 3.15A 250V CURRENT DETECTION CIRCUIT VOLTAGE LOCK OUT CIRCUIT 105 7818 1_8 ٧ D7 D1FL20U 15V 10/50V #A

1 330/25V 10/20

1 330/25V 10/50V #A TM601 (1) C (F, 7) oP-AN-CT R645 1SS355 TM600001 - 100-UDZS8.284 SERIAL CIRCUIT PFC5000 F110 PFC5000 CN110 PFC5000 CN110 PFC5000 F110 PFC OVER VOLTAGE R649 R649 0R0 <1/10W> HYIC20 RPZ-1F or RPZ-2F UF 4005 5VLJ 13 12 258 \$08 \$ (79)**0** 1SS355 DC VOLTAGE DETECTION CIRCUIT VA110 470V <TNR> W4
RED OLSERIAL
SERIAL
B P-AN-DC0(1, 7) IC3 TOP243P R13 47 <1/10W> R672 3.83k 1% <1/10W> SW POWER SUPPLY 47/35VF PEAK LOAD CURRENT DETECTION CIRCUIT 2 1 R44 W 347 K PFC5000-0502 JM500 FH501 G5NB-14 F500 F500 F500 T3,153,250V F 14-WAY VALVE DAN2 P404 4WV IC1 MB90460 P-AN-1Lo(1, 7) 2 1 2 3 1 C 40 - 1 2 BA4560 < 1 P-FAN-INO (H. 5) CN500 P-DBG-40 (G, 6) AWV | 2 | 2 | 1 | 2 | 1 | 2 | K501 ES12D2-0 P-FANPWMO (H, 5) P-PFC-Co (J, 5) REVERSE CURRENT DETECTION CIRCUIT (J, 13)_{OTAUX} P-AN-CTO (B. 5) POI T12V D1 VSLR-332VR NRED> R3 \$2.2k \$1/10W> P17 (H, 13) OP-E2P-SK D503H² D504H² P13 (C, 13) OP-SPDPOW P-PFCPWMo(1, 13)# JM900 (C, 6) P14 TTXDo(J. 13) TAUX3o(K. 13) **0**(67) 21 R1 \$10k \$<1<u>/10W> 34</u> (H, 13) OP-E2P-DI L800 BL02Rn 1 T15V 1 15V (1, 5) P-EPV-A 45 P24 P-POS o(G, 13) P26 -12 R800 ((B. 13) OPPECTRIP (G. 13) OPPCTRIP (H. 13) OP - V (H. 13) OP - V (H. 13) OP - Y P-POS 0 (G. 7) P-V4-AC0(G, 6) 27 P25 P02 28 P30 P-TTRIPO (H. 7) P03 29 51 x P31 P-V4-DC0(G, 6) (37)**Q**4 P-LED0(G, 6) 52 _V 30 (H, 13) OP - W (H, 13) OP - Z (40)07 VP (41)08 VP (42)09 VN (39)**0**6 31 53 Y P-PR o(G, 6) D800 R803 LC801 DAN217U 1k 270.01 <1/10W> # (E, 7) OP-FANPWM (1, 13) OP-PFCEN P-S00(F, 6) 32 54 w P34 P07 CN801 B5P6-VH -B-L DC FAN MOTOR P-TTRIPO (G, 13) (E, 7) op-FAN-IN 33 P 35 55 Z IPM CONTROL P10 | C30 C1 0.1 <F> 1/1/2 | 1/41 DCFAN P-E2P-CS0(H, 13) 42 18 P-EPV-B0(1, 5) MDO P-EPV-Do(1, 5) 43 UM902 2 MDEL DM9032 CHANGE 1 JM9032 CHANGE 2 CHANGE 0 M9012 MORE 2 M901 CHANGE 0 <1/4W> 44 P-EPV-Co(1, 5) P23 P-AN-THO(J, 5) 10 P43 2 3 **Q**(59) P57 P-AN-1Lo(E, 13) 62 P-PFCENO(H. 11) P42 P56 Q450 DTC124EUA - W NN RED (K. 13) (J. 13) (J. 13) (J. 13) 4 **Q**(60) P-AN-DC0(D. 13) P41 P-PFCPWMo(F, 7) EXPANSION < 50(61) 60(62) P55 P-AN-ACO(L, 5) P45 R450 22k <1/10W> P54 19 (K, 13) TRES P-AN-TEO(K. 5) RSTX C450 1000p 48 P-AN-TAO(K, 5) 13 R10 100k <1/10W> P-AN-TDO(K, 5) 24 49 22 GND 23 GND THERMISTOR (1, 7) OP-AN-TH (55)**Q** 4 > TTXD 8.00MHz SFOEC> (56)**0** 5 > TRXD <1/10W> (J, 7) OP-AN-TD R61 R60 13k 10k <1/10W> 7 TAUX3 MICOM DISCHARGED IC10 8 > TCK (57)**Q** 9 > /TRES CN61 -1 (C, 6)_{oP}-SI R63 R62 4.75 K12 10 K <1/10W <1/10W <10 K R65 R64 38.3 K1% 10 K <1/10W <1/10W > (J, 7) OP-AN-TE

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R954 10k ≶ <1/10W>

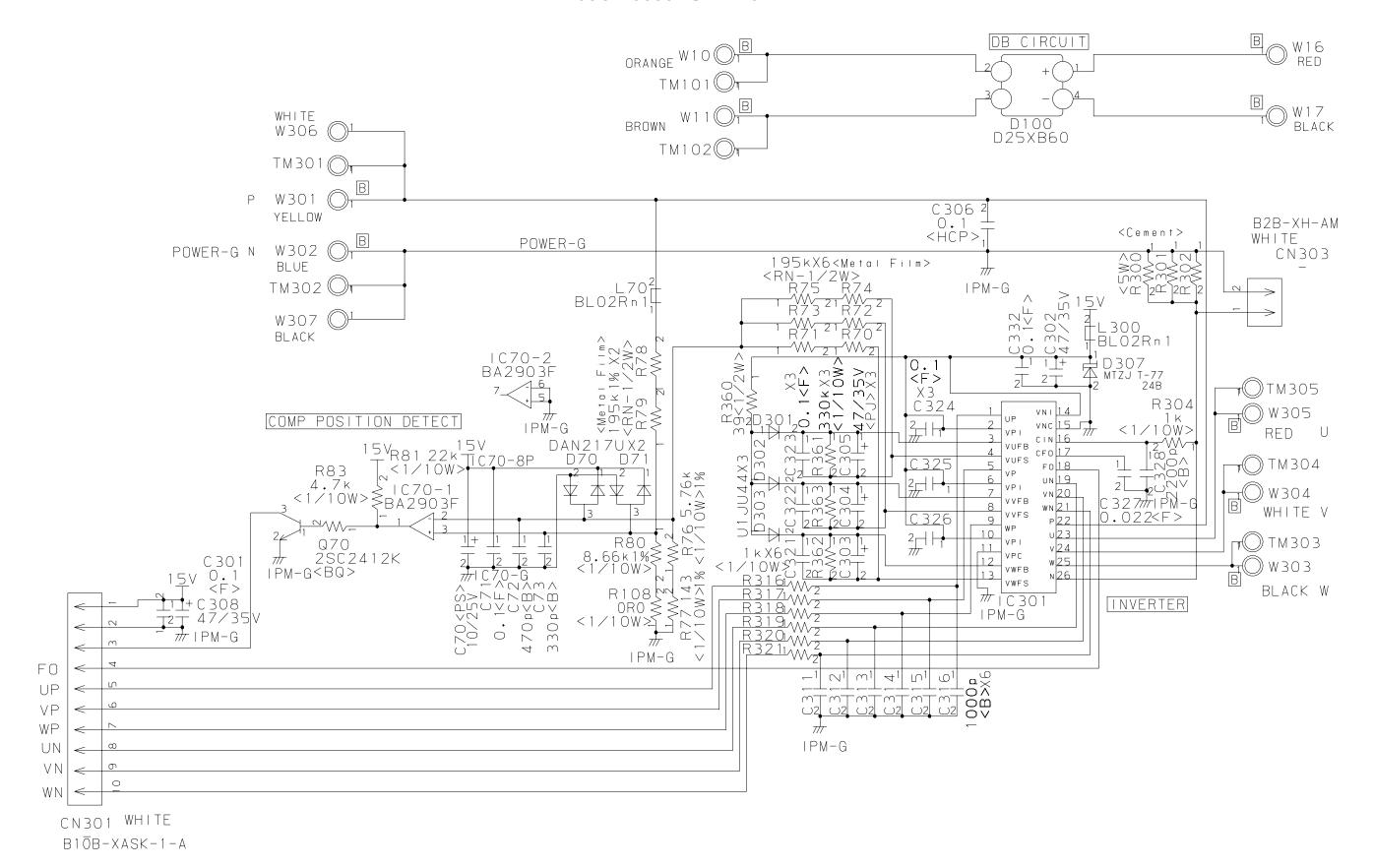
2/x <1/10W> (J, 7) OP-AN-TA

(1, 7) op-AN-AC

B W25 ORANGE ORANGE ORANGE 172520-2 CN100 TM1
W28
BORANGE TWZ WZ9 TM5 12v T R101 ZPRORCH400 PTC THERMISTOR ZPRORCH400 PTC THERMISTOR 3.3 3.3 108 C107 1.0<LE>-M L102 N200500K1D7C C106 3,3<LE> .0<LE>-M <E> <E> 0000 10000 C110 C100 - N-S CT DUT
TM6 W21
OGRAY W9 OL C105 C104 0.033 0.033 0.032 0.032 0.032 0.033 3.3 RCH3818-022PF07 FILTER CIRCUIT FHIOD PFC5000 -0502 3.15A o' 250V <TSCR> (TSCR> FHIOI PFC5000 SA100 RA-302M C100 .3<LE> .0<LE>-M VA100 470V <TNR> VA101 470V <TNR> AC VOLT OUT2 W23 OTWAITE OF WAITE W3 GREEN L BLACK WI OLD N WHITE WZ OL T BLACK T WHITE OIB AC VOLT DUT W19 OT W20 OT W20 OT W160B BLACK EARTH 10 L INDOOR UNIT

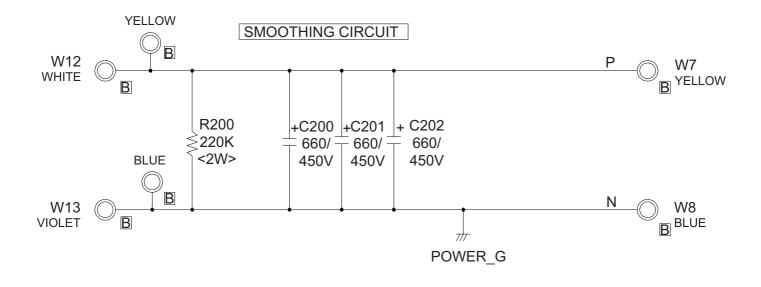
POWER SUPPLY PCB K05CW-0500HUE-FL0

TR PCB ASSY (IPM) K05CZ-0500HUE-TR0



Models: MR24C3F MR24Y3F

CAPACITOR PCB ASSY K05DG-0500HUE-P0



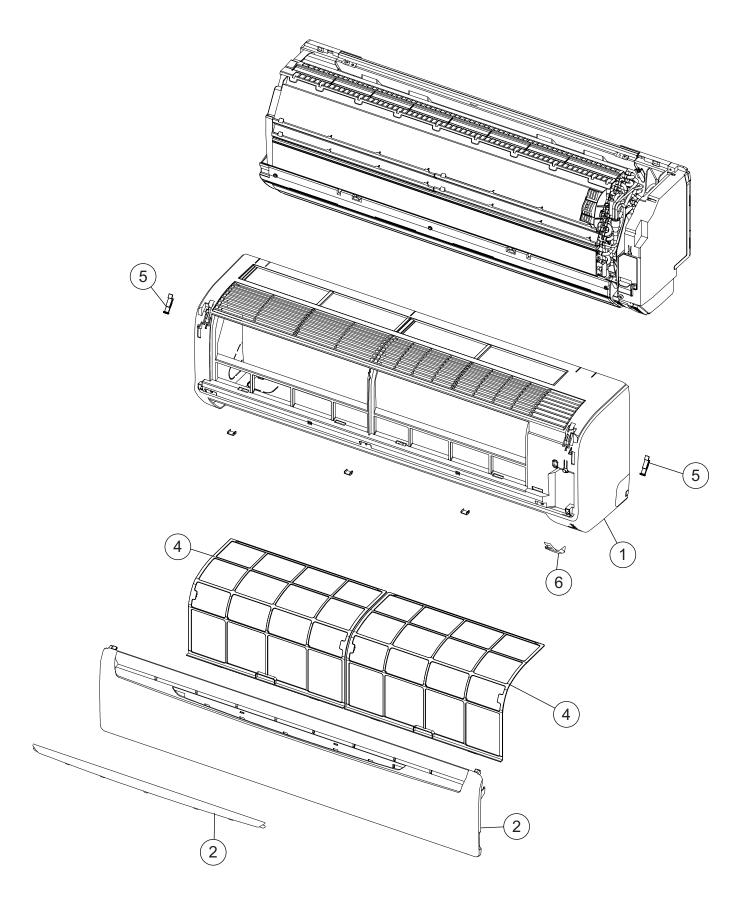
ERROR CONTENTS

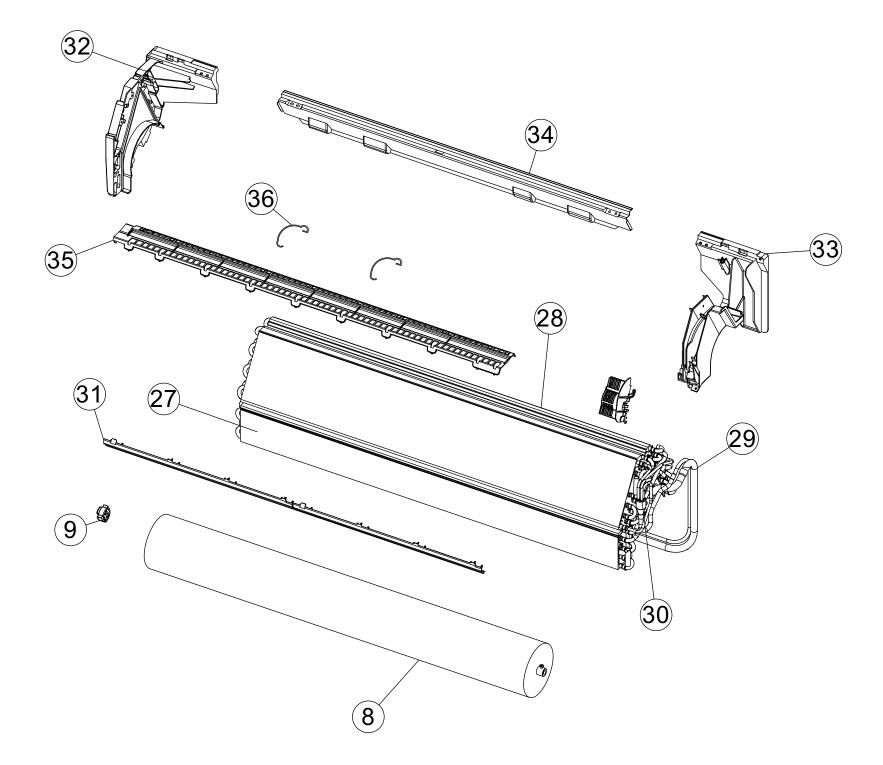
Display		play		
Error	Operation LED	Timer LED	Error	
		2 flash	Serial signal (reverse) error, at operation start up	
		3 flash	Serial signal (reverse) error, during oeration	
Serial signal error	Normal	4 flash	Serial signal (forward) error, at operation start up	
		5 flash	Serial signal (forward) error, during operation	
		8 flash	Wired remote controller error	
Indoor unit the maieter error	2 floob	2 flash	Indoor temperature thermistor open / short	
Indoor unit thermistor error	2 flash	3 flash	Heat exchanger middle thermistor open / short	
		2 flash	Discharge thermistor open / short	
Outdoor unit thermistor error	3 flash	3 flash	Heat exchanger thermistor open	
Outdoor unit thermistor error	3 liasii	4 flash	Outdoor temperature thermistor open / short	
		8 flash	Compressor temperature thermistor open / short	
		2 flash	Forced automatic SW welded	
	4 flash	3 flash	Main relay welded	
Indoor unit control error		4 flash	Power interruption error	
		7 flash	VDD permanent stop protection	
		8 flash	reverse VDD permanent stop protection	
	5 flash	2 flash	Current trip error	
		3 flash	CT abnormal	
Outdoor unit control error		5 flash	Compressor location detection error	
		6 flash	Outdoor unit fan drive system abnormal	
Indoor fan motor error	6 flash	2 flash	Abnormal lock	
mager fair motor error	o liasti	3 flash	Abnormal rotation	
		2 flash	Discharge Temperature abnormal	
Refrigerant cycle error	7 flash	3 flash	Cooling high pressure abnormal rise	
		5 flash	Pressure switch trouble	
	8 flash	2 flash	Active filter voltage trouble (second time)	
Optional function error		3 flash	Active filter voltage trouble (first time)	
		4 flash	PFC circuit error	
Model error	Blinking	Blinking	Model error	

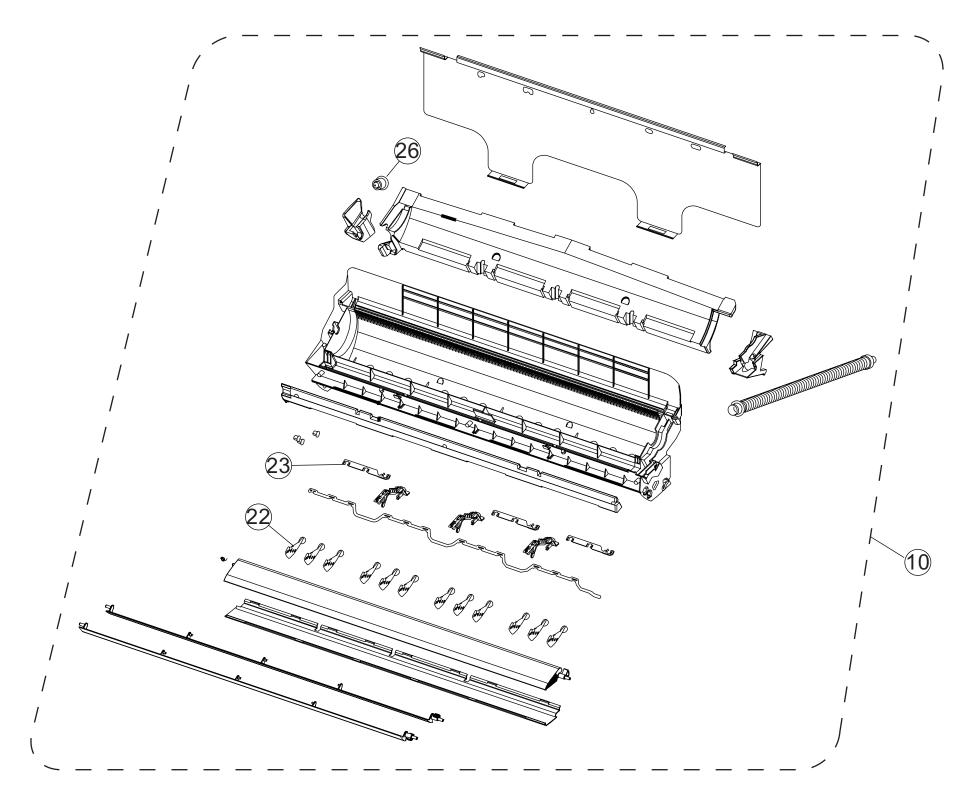
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DISASSEMBLY ILLUSTRATION

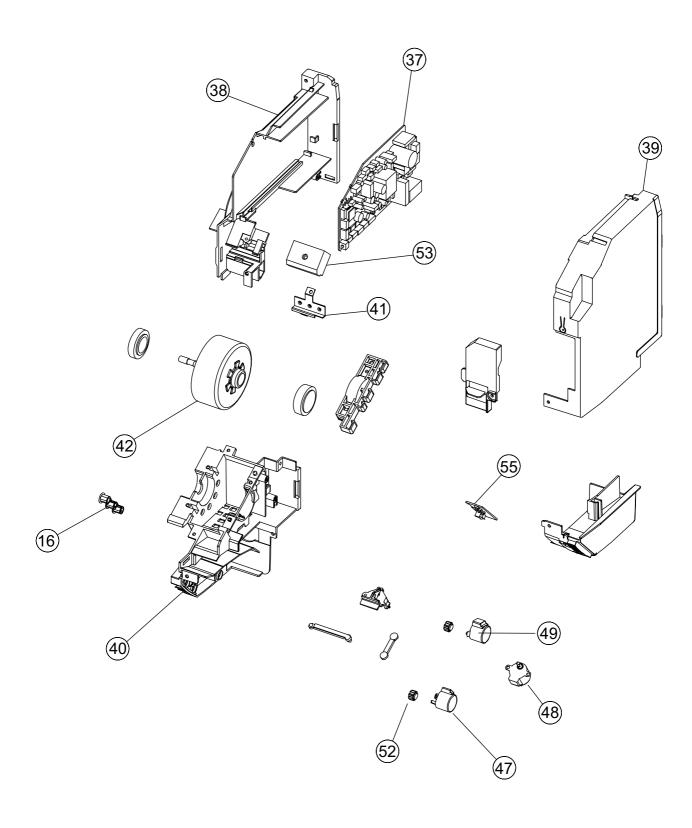
Models: MW24C3F, MW24Y3F



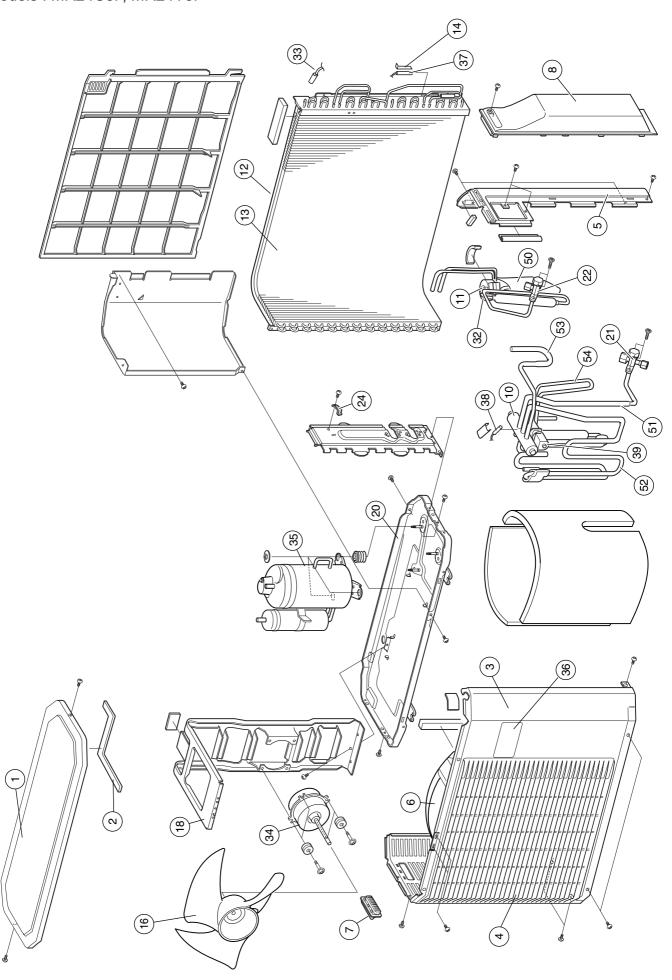




Models: MW24C3F, MW24Y3F

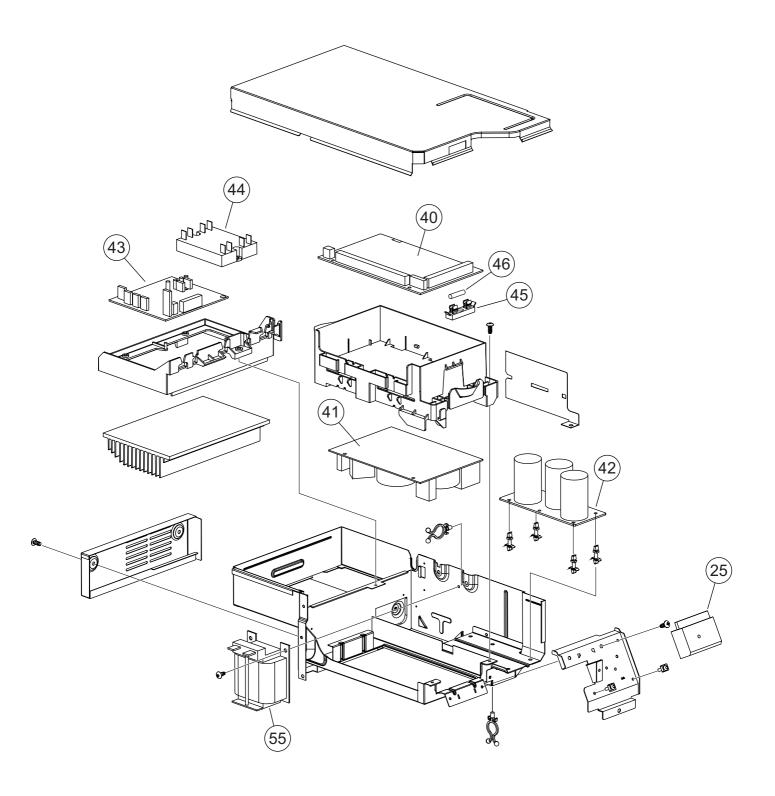


Models: MR24C3F, MR24Y3F



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Models: MR24C3F, MR24Y3F



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PARTS LIST

INDOOR UNIT

INDOOR		Par	<u> </u>	
Ref No	Descriprion	MW24C3F	MW24Y3F	Ord. Q'ty
1	Front Panel Total Assy	9315335081	9315335074	
2	Intake Grille Assy	9315336064	9315336064	
4	Air Filter	9315014016	9315014016	
5	Clamper Grille	9306755010	9306755010	
6	Receiver Window	9315010018	9315010018	
8	Crossflow Fan Assy	9315024015	9315024015	
9	Bearing C Assy	9306628017	9306628017	
10	Casing Assy	9315331014	9315331014	
22	R and L Louver	9311997016	9311997016	
23	Spacer B	9312441013	9312441013	
26	Drain Cap	9367677009	9367677009	
27	Evaporator Assy	9315347015	9315347015	
28	Evaporator Assy B	9315349019	9315349019	
29	Connection Pipe Assy	9315354013	9315354013	
30	Distributor Assy	9315350015	9315350015	
31	Water Seal	9315251015	9315251015	
32	Evaporater Holder R	9314994012	9314994012	
33	Evaporater Holder L	9314995019	9314995019	
34	Rear Bracket	9315022011	9315022011	
35	Filter Guide	9315013019	9315013019	
36	Filter Guard	9315411013	9315411013	
37	Controller PCB Assy	9707090086	9707090079	
38	Control Box	9314996023	9314996023	
39	Control Cover	9314997020	9314997020	
40	Motor Case	9314998027	9314998027	
41	Terminal Earth	9315028013	9315028013	
42	DC Brushless Motor	9602163014	9602163014	
46	Motor, Step	9900384029	9900384029	
47	Motor, Step	9900384036	9900384036	
48	Motor, Step	9900139063	9900139063	
52	Gear A	9309994003	9309994003	
53	Terminal	9900385019	9900385019	
55	Display PCB Assy	9707210019	9707210019	
-	Remote Controller	9315027160	9315027153	

OUTDOOR UNIT

OUIL	OUTDOOR UNIT						
Ref No.	Description	Part	s No.				
Rei No.	Description	MR24C3F	MR24Y3F				
1	Top Panel Assy	9309230057	9309230057				
2	Seal (Top)	9309228016	9309228016				
3	Cabinet Sub Assy	9314809019	9314809019				
4	Blow Grill	9308884015	9308884015				
5	Cabinet Right Assy	9309236028	9309236028				
6	Fan Ring	9308885012	9308885012				
7	Grip	9308880017	9308880017				
8	Switch Cover Assy	9309237049	9309237049				
10	4-Way Valve	9900163013	9900163013				
11	Pulse Motor Valve	9900056018	9900056018				
12	Condenser Assy B	9315303011	9315303011				
13	Condenser Assy	9315302014	9315302014				
14	Thermistor Spring A	313728262708	313728262708				
16	Propeller Fan	9309909014	9309909014				
18	Motor Bracket Assy	9313432027	9313432027				
20	Base Assy	9315296023	9315296023				
21	3-Way Valve Assy	9315414014	9315414014				
22	2-Way Valve Assy	9313062019	9313062019				
24	Cord Clamp	9307271014	9307271014				
25	Terminal, 5 Pin	9703874024	9703874024				
32	Expansion Valve Coil	9900057039	9900057039				
33	Outdoor Temp. Thermistor	9703516108	9703516108				
34	DC Brushless Motor	9602110018	9602110018				
35	Compressor Assy	9315297013	9315297013				
	,						
36	Emblem Rear	9312661015	9312661015				
37	Heat Exchanger Thermistor	9704220059	9704220059				
38	Discharge Thermistor	9704219091	9704219091				
39	Solenoid	9970055010	9970055010				
40	Inverter PCB Assy	9707121124	9707121124				
41	Power PCB Assy	9707128055	9707128055				
42	Power PCB Assy	9707129052	9707129052				
43	TR PCB Assy	9707125054	9707125054				
44	ACTPM	9703457012	9703457012				
45	Fuse Holder	0500158072	0500158072				
46	Fuse	0600086039	0600086039				
50 51	Pulse Motor Valve Assy JNT PIPE(3WV)AS	9315310019 9315308016	9315310019 9315308016				
52	PIPE(COND OLT)AS	9315304018	9315304018				
53	PIPE(COND ILT)AS	9315305015	9315304016				
	I II E(OOND IET)AO	3313303013	3313333013				
54	Discharge Pipe Assy	9315312013	9315312013				
55	Chock Coil	9900366018	9900366018				

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STANDARD ACCESSORIES

Name and Shape	Part No.
Wall hook bracket	9315023018
Remote control unit	9315027160 (for cooling only) 9315027153 (for heat and cool)
Remote control unit holder	9305642045
Battery (penlight)	0600185534
Cloth tape	9310519004
Tapping screw (big)	0700076046
Tapping screw (small)	0700019036
Drain pipe	9301102000 (for heat and cool)